10/678,135

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=> d his

     (FILE 'HOME' ENTERED AT 10:12:54 ON 18 MAR 2005)

     FILE 'REGISTRY' ENTERED AT 10:13:08 ON 18 MAR 2005
L1             1 S SITOSTANOL/CN
L2               SCREEN 966 AND 1006 AND 1051
L3               SCREEN 1821 OR 1822 OR 1823 OR 1824
L4               STRUCTURE UPLOADED
L5               QUE L4 AND L2 AND L3
L6             0 S L5 FUL
L7               SCREEN 966 AND 1006 AND 1051
L8               SCREEN 1821 OR 1822 OR 1823 OR 1824
L9               STRUCTURE UPLOADED
L10              QUE L9 AND L7 AND L8
L11            0 S L10 FUL

     FILE 'CAPLUS' ENTERED AT 10:21:47 ON 18 MAR 2005
L12          906 S L1 OR SITOSTANOL?/IA
L13        42220 S (FATTY(3W)ESTER#)/IA
L14       152834 S CHOLESTEROL#/IA
L15           52 S L12 AND L13 AND L14
L16           77 S L12 AND L13
L17           19 S L12(3A)L13
L18           16 S L17 AND L14
                 SEL L18 15 RN

     FILE 'REGISTRY' ENTERED AT 10:26:13 ON 18 MAR 2005
L19            4 S E1-4

     FILE 'CAPLUS' ENTERED AT 10:27:15 ON 18 MAR 2005
                 SEL L18 14 RN

     FILE 'REGISTRY' ENTERED AT 10:27:28 ON 18 MAR 2005
L20           10 S E5-14

     FILE 'USPATFULL' ENTERED AT 10:28:04 ON 18 MAR 2005
L21           43 S SITOSTANOL(4W)(FATTY(3W)ESTER#)
L22        40860 S CHOLESTEROL
L23           43 S L21 AND L22
L24      2532049 S PY>1991
L25            0 S L23 NOT L24

=> d his; d l11 tot ibib abs hitstr

     (FILE 'HOME' ENTERED AT 11:11:10 ON 18 MAR 2005)

     FILE 'REGISTRY' ENTERED AT 11:13:56 ON 18 MAR 2005
L1               STRUCTURE UPLOADED
L2               QUE L1
L3         10904 S L2 FUL
L4               STRUCTURE UPLOADED
L5               QUE L4
L6          3629 S L5 FUL

     FILE 'CAPLUS' ENTERED AT 11:16:19 ON 18 MAR 2005
L7          1393 S L6/P
L8            44 S L6/THU
L9        124038 S ESTERIF?/IA
L10       683181 S CATALYST/IA
L11           16 S L7 AND L9 AND L10
L12         1943 S (FOOD(2W)GRADE?)/IA
L13            4 S L7 AND L9 AND L10 AND L12
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L14 12 S L11 NOT L13

FILE 'REGISTRY' ENTERED AT 11:24:54 ON 18 MAR 2005
L15 1 S SODIUM ETHYLATE/CN

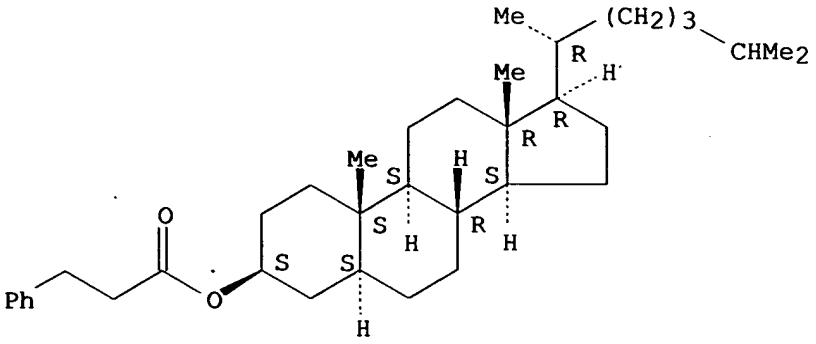
FILE 'CAPLUS' ENTERED AT 11:25:43 ON 18 MAR 2005
L16 2492 S (SODIUM ETHYLATE)/IA OR L15
L17 2 S L7 AND L16
L18 0 S L16 AND L11

L11 ANSWER 1 OF 16 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2004:105227 CAPLUS
DOCUMENT NUMBER: 140:303085
TITLE: An Effective Use of Benzoic Anhydride and Its Derivatives for the Synthesis of Carboxylic Esters and Lactones: A Powerful and Convenient Mixed Anhydride Method Promoted by Basic Catalysts
AUTHOR(S): Shiina, Isamu; Kubota, Mari; Oshiumi, Hiromi; Hashizume, Minako
CORPORATE SOURCE: Department of Applied Chemistry, Tokyo University of Science, Tokyo, 162-8601, Japan
SOURCE: Journal of Organic Chemistry (2004), 69(6), 1822-1830
CODEN: JOCEAH; ISSN: 0022-3263
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Various carboxylic esters are obtained at room temp. in excellent yields with high chemoselectivities from nearly equimolar amts. of carboxylic acids and alcs. using 2-methyl-6-nitrobenzoic anhydride with triethylamine by the promotion of a basic **catalyst** such as 4-(dimethylamino)pyridine. A variety of lactones are also prepd. in high yields at room temp. from the corresponding .omega.-hydroxycarboxylic acids with use of 2-methyl-6-nitrobenzoic anhydride in the presence of 4-(dimethylamino)pyridine. A similar reaction occurs with triethylamine when using a catalytic amt. of 4-(dimethylamino)pyridine 1-oxide as an effective promoter for the intramol. condensation reaction. These methods are successfully applied to the synthesis of erythro-aleuritic acid lactone and an eight-membered-ring lactone moiety of octalactin A and oxalactin B. The efficiency of the cyclizations is compared to those of other reported lactonizations.

IT **14914-98-8P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of carboxylic acid esters and lactones from alcs. and acids in presence of benzoic acid anhydride derivs. and application of mixed anhydride method promoted by basic catalysts)
RN 14914-98-8 CAPLUS
CN Cholestan-3-ol, benzenepropanoate, (3.beta.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



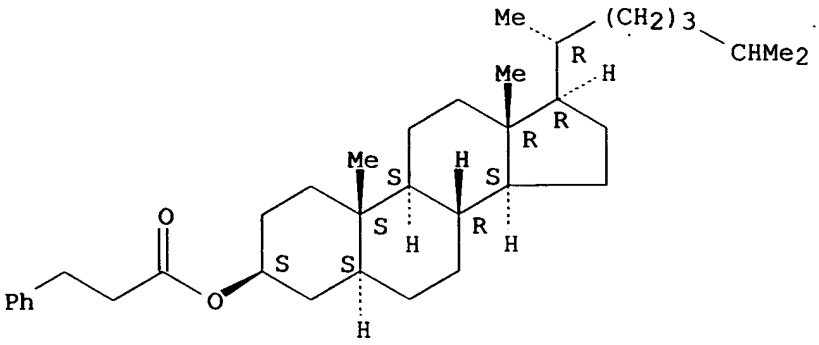
REFERENCE COUNT: 79 THERE ARE 79 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 2 OF 16 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2004:75177 CAPLUS
DOCUMENT NUMBER: 140:303079
TITLE: An effective method for the synthesis of carboxylic esters and lactones using substituted benzoic anhydrides with Lewis acid catalysts
AUTHOR(S): Shiina, Isamu
CORPORATE SOURCE: Faculty of Science, Department of Applied Chemistry, Tokyo University of Science, Kagurazaka, Shinjuku-ku, Tokyo, 162-8601, Japan
SOURCE: Tetrahedron (2004), 60(7), 1587-1599
CODEN: TETRAB; ISSN: 0040-4020
PUBLISHER: Elsevier Science B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB An efficient mixed-anhydride method for the synthesis of carboxylic esters and lactones using benzoic anhydride having electron withdrawing substituent(s) is developed by the promotion of Lewis acid catalysts. In the presence of a catalytic amt. of TiCl2(ClO4)2, various carboxylic esters are prepd. in high yields through the formation of the corresponding mixed-anhydrides from 3,5-bis(trifluoromethyl)benzoic anhydride and carboxylic acids. The combined **catalyst** consisting of TiCl2(ClO4)2 together with chlorotrimethylsilane functions as an effective **catalyst** for the synthesis of carboxylic esters from free carboxylic acids and alcs. with 4-(trifluoromethyl)benzoic anhydride. Various macrolactones are prepd. from the free .omega.-hydroxycarboxylic acids by the combined use of 4-(trifluoromethyl)benzoic anhydride and titanium(IV) catalysts together with chlorotrimethylsilane under mild reaction conditions. The lactonization of trimethylsilyl .omega.-(trimethylsiloxy)carboxylates using 4-(trifluoromethyl)benzoic anhydride is also promoted at room temp. in the presence of a catalytic amt. of TiCl2(ClO4)2. An 8-membered ring lactone, a synthetic intermediate of cephalosporolide D, is successfully synthesized according to this mixed-anhydride method using 4-(trifluoromethyl)benzoic anhydride by the promotion of a catalytic amt. of Hf(OTf)4.

IT **14914-98-8P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of carboxylic esters and lactones using substituted benzoic anhydrides with Lewis acid catalysts)
RN 14914-98-8 CAPLUS
CN Cholestan-3-ol, benzenepropanoate, (3.beta.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).

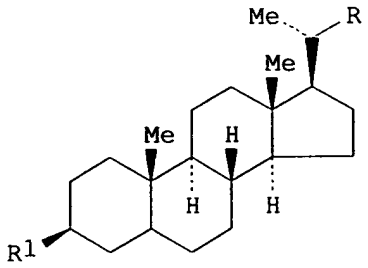


REFERENCE COUNT: 107 THERE ARE 107 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

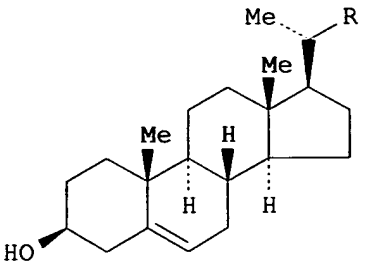
L11 ANSWER 3 OF 16 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2001:290212 CAPLUS
DOCUMENT NUMBER: 134:281023
TITLE: Sterol derivatives, synthetic method and its application
INVENTOR(S): Wen, Jianxun; Shen, Yuehai
PATENT ASSIGNEE(S): Shanghai Inst. of Organic Chemistry, Chinese Academy of Sciences, Peop. Rep. China
SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 41 pp. CODEN: CNXXEV
DOCUMENT TYPE: Patent
LANGUAGE: Chinese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 1263104	A	20000816	CN 1999-125751	19991224
CN 1111169	B	20030611		
PRIORITY APPLN. INFO.:			CN 1999-125751	19991224

OTHER SOURCE(S): CASREACT 134:281023; MARPAT 134:281023
GI



I



II

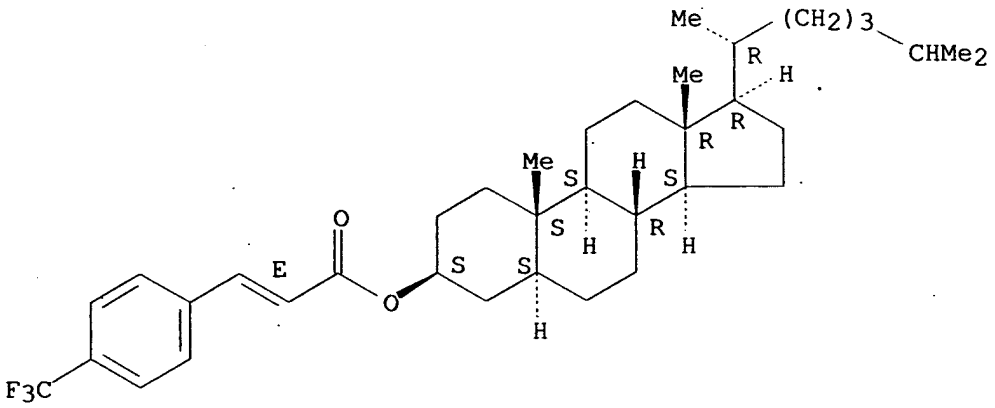
AB The sterol derivs. with formula I (C5-C6 either double bond or single bond; R = O, 5-methylpentyl, CH2CH2CnF2n+1, CH2(CH2)mH, 3-phenylpropyl, vinyl, or phenylvinyl; R1 = OH, 4-Fp-benzoyloxy, Fp-phenoxycarbonyloxy, Fp- phenylaminocarbonyloxy, (Fp-phenyl)acryloyloxy, Fp-4-H(CH2)nbenzoyloxy, 4-H(CH2)nObenzoyloxy, 4- [CF3(CF2)q(CH2)2OC]phenylamino ,or 4- [CF3(CF2)q(CH2)2OC]phenoxycarbonyloxy, Fp-benzoyloxy, or CH3(CH2)jCO2; n = 1-10; m = 1-4; p = 1-4; q = 1-8; and j = 0-10) were claimed. Compds. I were synthesized by **esterification** of sterol II with carboxylic acid having formula R'OOC in the presence of dehydrant DCC, and **catalyst** 4-N,N-dimethylaminopyridine (DMAP) in org. solvent at (-10)-50.degree. for 5-48 h or with R'COCl in the presence of org. amine in org. solvent at (-10)-50.degree. for 0.5-24 h. Thus, pregnenolone, mixed with 3,4-difluorobenzoic acid, DCC, DMAP in THF, stirred at room temp. for 1-2 days, after routine treatment, gave the product pregnenolone 3,4-difluorobenzoate with 73.9% yield. The sterol derivs. were used as liq. crystal material.

IT **332423-07-1P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(sterol derivs., synthetic method and its application)

RN 332423-07-1 CAPLUS

CN Cholestan-3-ol, (2E)-3-[4-(trifluoromethyl)phenyl]-2-propenoate, (3.beta.,5.alpha.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.

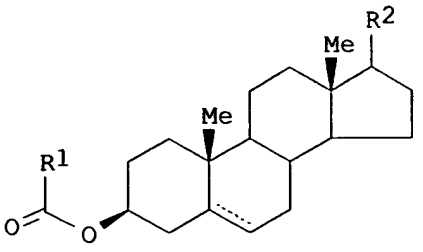


L11 ANSWER 4 OF 16 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2001:91543 CAPLUS
DOCUMENT NUMBER: 134:131709
TITLE: Method for producing sterol and stanol-esters
INVENTOR(S): Roden, Allan; Williams, James L.; Bruce, Ruey; Detrano, Frank; Boyer, Marie H.; Higgins, John D., III
PATENT ASSIGNEE(S): McNeil-PPC, Inc., USA
SOURCE: U.S., 7 pp., Cont.-in-part of U.S. Ser. No. 211,978.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 5
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6184397	B1	20010206	US 1999-336773	19990621
US 5892068	A	19990406	US 1998-139460	19980825
US 6147236	A	20001114	US 1998-211978	19981215
IN 186960	A	20011222	IN 1999-CA697	19990809
NZ 337240	A	20000228	NZ 1999-337240	19990813
AU 9944505	A1	20000309	AU 1999-44505	19990816
AU 767636	B2	20031120		
JP 2000072793	A2	20000307	JP 1999-235542	19990823
EP 982316	A2	20000301	EP 1999-306718	19990824
EP 982316	A3	20000705		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
KR 2000017479	A	20000325	KR 1999-35134	19990824
MX 9907839	A	20000930	MX 1999-7839	19990824
RU 2230750	C2	20040620	RU 1999-118509	19990824
CN 1251837	A	20000503	CN 1999-121644	19990825
CN 1131871	B	20031224		
BR 9903832	A	20000919	BR 1999-3832	19990825

PRIORITY APPLN. INFO.:
US 1998-139460 A2 19980825
US 1998-211978 A2 19981215
US 1999-336773 A 19990621

OTHER SOURCE(S): CASREACT 134:131709; MARPAT 134:131709
GI



I

AB The present invention provides a method for the direct **esterification** of stanols and sterols with **catalyst**, which can be acidic or basic, in the presence of a color deactivating agent to form stanol/sterol-esters I (R1 = alkyl fatty acid side chain; R2 = alkyl steroidal side chain). The method provides a synthetic route that is amenable to large scale prodn. of the stanol-esters in high yields and employs a food grade process free of org. solvents or mineral acids. Thus, .beta.-sitostanol stearate was prepd. by NaHSO4 catalyzed **esterification** of .beta.-sitostanol and stearic acid.

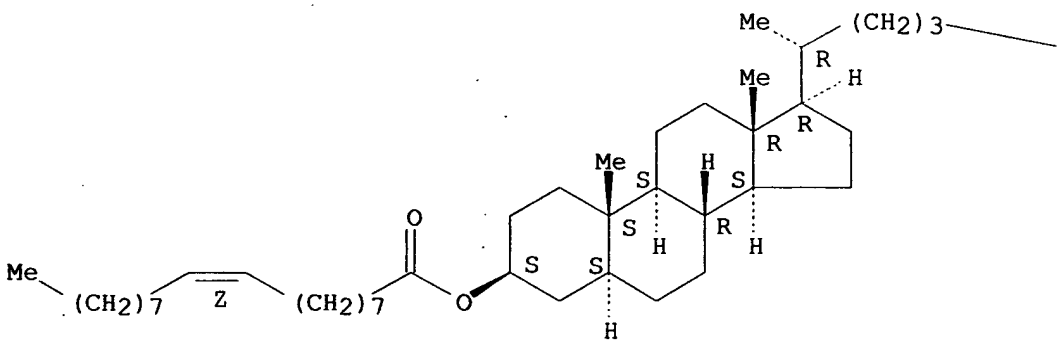
IT **2078-50-4P**, Cholestanol oleate **42493-62-9P**, .beta.-Sitostanol palmitate **108515-19-1P**, .beta.-Sitostanol oleate **108590-63-2P**, .beta.-Sitostanol stearate
RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)
(method for producing sterol and stanol-esters)

RN 2078-50-4 CAPLUS

CN Cholestan-3-ol, (9Z)-9-octadecenoate, (3.beta.,5.alpha.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.

PAGE 1-A



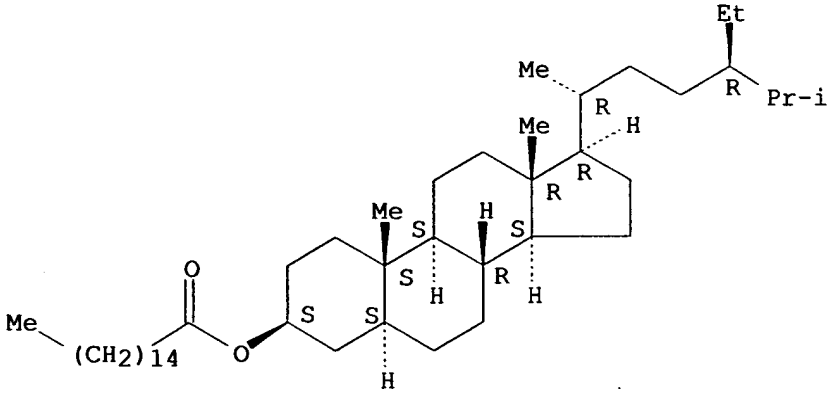
PAGE 1-B

—CHMe2

RN 42493-62-9 CAPLUS

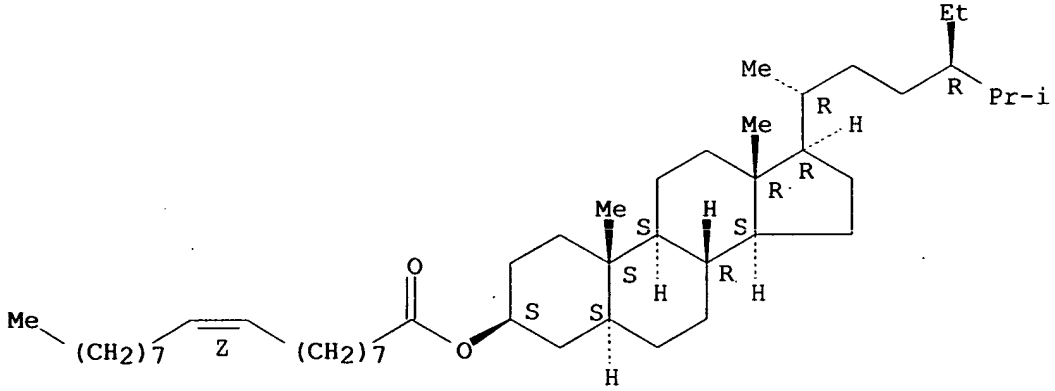
CN Stigmastan-3-ol, hexadecanoate, (3.beta.,5.alpha.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



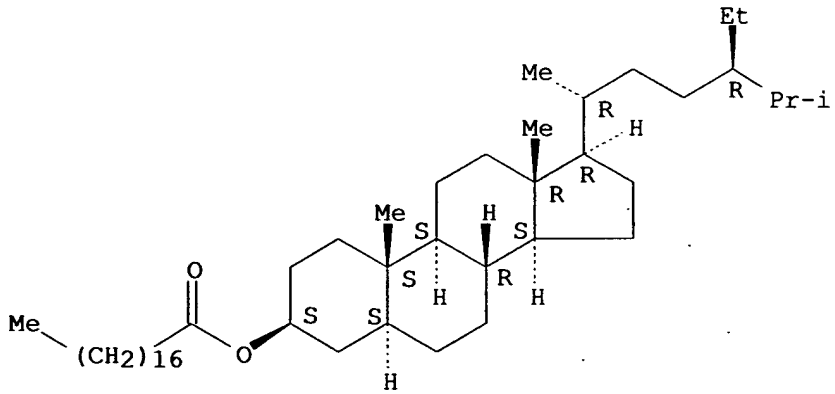
RN 108515-19-1 CAPLUS
CN Stigmastan-3-ol, (9Z)-9-octadecenoate (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



RN 108590-63-2 CAPLUS
CN Stigmastan-3-ol, octadecanoate, (3.beta.,5.alpha.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

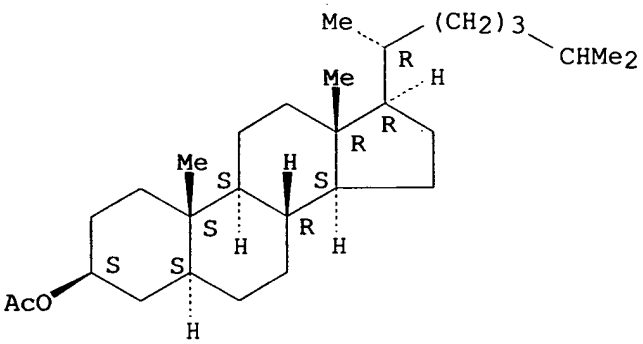
L11 ANSWER 5 OF 16 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2000:862656 CAPLUS
DOCUMENT NUMBER: 134:237037
TITLE: Ceric ammonium nitrate (CAN)-a useful **catalyst** for the rapid and high-yield **esterification** of carboxylic acids and alcohols with special reference to steroid and other multi-functional natural products
AUTHOR(S): Goswami, Papori; Chowdhury, Pritish
CORPORATE SOURCE: Organic Chemistry Division (Natural Products), Regional Research Laboratory, Jorhat, 785 006, India
SOURCE: New Journal of Chemistry (2000), 24(12), 955-957
CODEN: NJCHE5; ISSN: 1144-0546
PUBLISHER: Royal Society of Chemistry
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 134:237037

AB Ceric ammonium nitrate was found to be an efficient **catalyst** for the rapid **esterification** of carboxylic acids with primary and secondary alcs. Under similar conditions, tertiary alcs. and arom. acids were not **esterified**.

IT **1255-88-5P 57674-67-6P 59000-59-8P 122241-81-0P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of esters by cerium ammonium nitrate-catalyzed **esterification** of carboxylic acids with primary and secondary alcs.)

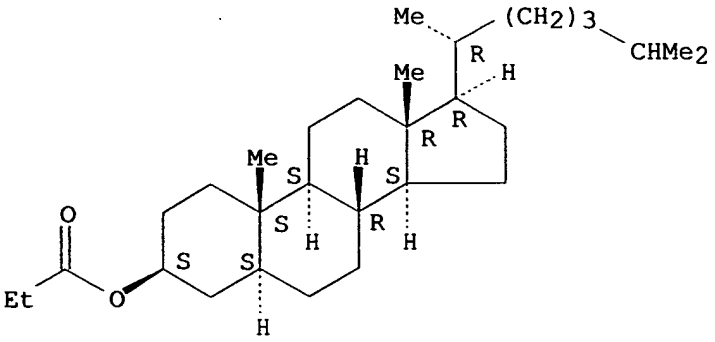
RN 1255-88-5 CAPLUS
CN Cholestan-3-ol, acetate, (3.beta.,5.alpha.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



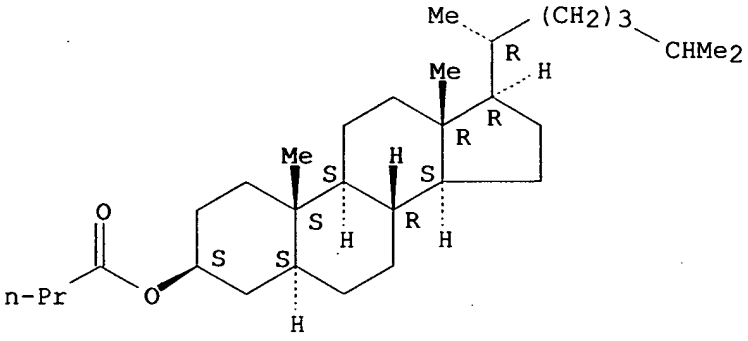
RN 57674-67-6 CAPLUS
CN Cholestan-3-ol, propanoate, (3.beta.,5.alpha.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



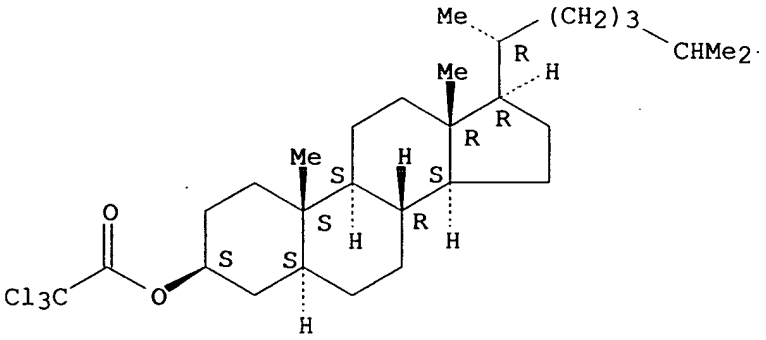
RN 59000-59-8 CAPLUS
CN Cholestan-3-ol, butanoate, (3.beta.,5.alpha.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 122241-81-0 CAPLUS
CN Cholestan-3-ol, trichloroacetate, (3.beta.,5.alpha.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 35 THERE ARE 35 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 6 OF 16 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2000:781554 CAPLUS
DOCUMENT NUMBER: 134:86422
TITLE: Fatty acid steryl, stanyl, and steroid esters by **esterification** and transesterification in vacuo using Candida rugosa lipase as **catalyst**

10/678,135

AUTHOR(S): Weber, Nikolaus; Weitkamp, Petra; Mukherjee, Kumar D.
CORPORATE SOURCE: Institute for Biochemistry and Technology of Lipids H. P. Kaufmann-Institute, Federal Centre for Cereal Potato and Lipid Research, Muenster, D-48147, Germany
SOURCE: Journal of Agricultural and Food Chemistry (2001), 49(1), 67-71
CODEN: JAFCAU; ISSN: 0021-8561
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 134:86422

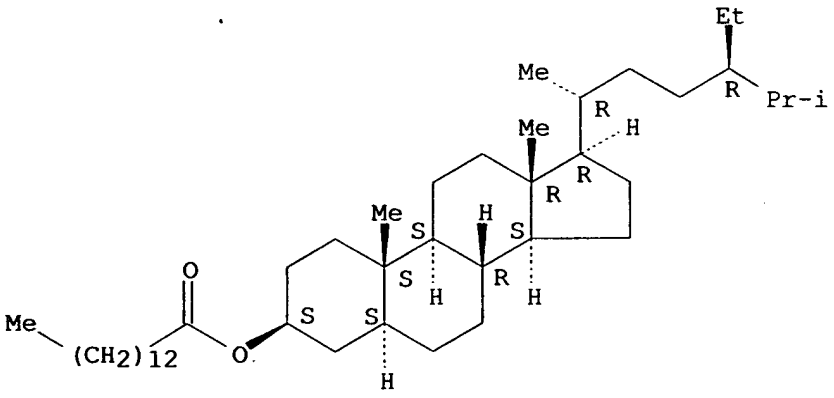
AB Sterols (sitosterol, cholesterol, stigmasterol, ergosterol, and 7-dehydrocholesterol) and sitostanol were converted in high to near-quant. yields to the corresponding long-chain acyl esters via **esterification** with fatty acids or transesterification with Me esters of fatty acids or triacylglycerols using lipase from Candida rugosa as biocatalyst in vacuo (20-40 mbar) at 40.degree.. Neither org. solvent nor water is added in these reactions. Under similar conditions, cholesterol was converted to cholesteryl butyrate and steroids (5.alpha.-pregnan-3.beta.-ol-20-one or 5-pregnen-3.beta.-ol-20-one) were converted to their propionic acid esters, both in moderate to high yields, via transesterification with tributyrin and tripropionin, resp. Reaction parameters studied in **esterification** include the temp. and the molar ratio of the substrates as well as the amt. and reuse properties of the C. rugosa lipase. Lipases from porcine pancreas, Rhizopus arrhizus, and Chromobacterium viscosum are quite ineffective as biocatalysts for the **esterification** of cholesterol with oleic acid under the above conditions.

IT **108517-13-1P**, .beta.-Sitostanol myristate
RL: BPN (Biosynthetic preparation); BIOL (Biological study); PREP (Preparation)
(prepn. of fatty acid steroid esters by enzymic **esterification** and transesterification with lipase)

RN 108517-13-1 CAPLUS

CN Stigmastan-3-ol, tetradecanoate, (3.beta.,5.alpha.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

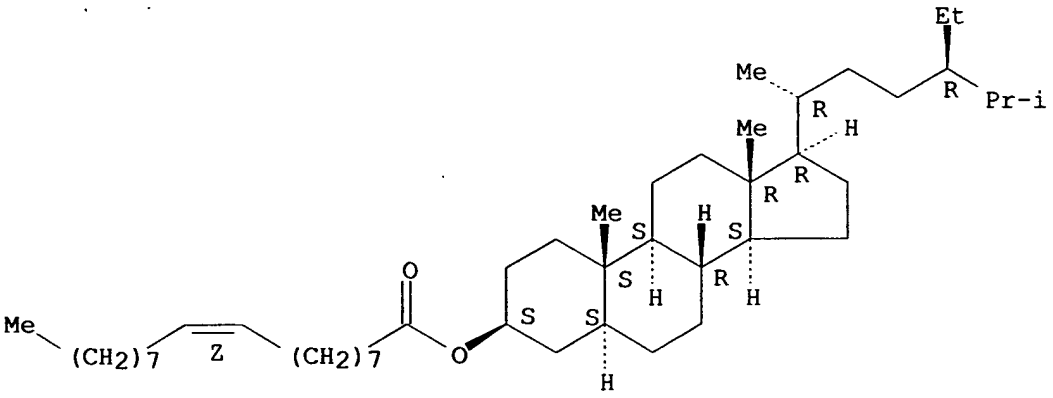


IT **108515-19-1P**, .beta.-Sitostanol oleate
RL: BPN (Biosynthetic preparation); BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PREP (Preparation); PROC (Process)
(prepn. of fatty acid steroid esters by enzymic **esterification** and transesterification with lipase)

RN 108515-19-1 CAPLUS

CN Stigmastan-3-ol, (9Z)-9-octadecenoate (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.

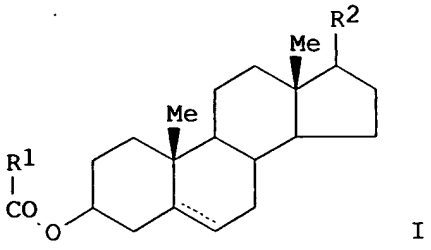


REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 7 OF 16 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2000:144573 CAPLUS
DOCUMENT NUMBER: 132:166391
TITLE: Preparation of sterol and stanol esters
INVENTOR(S): Roden, Allan; Williams, James L.; Bruce, Ruey; Detraino, Frank; Boyer, Marie H.; Higgins, John D., III
PATENT ASSIGNEE(S): McNeil-PPC, Inc., USA
SOURCE: Eur. Pat. Appl., 11 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 5
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 982316	A2	20000301	EP 1999-306718	19990824
EP 982316	A3	20000705		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
US 5892068	A	19990406	US 1998-139460	19980825
US 6147236	A	20001114	US 1998-211978	19981215
US 6184397	B1	20010206	US 1999-336773	19990621

PRIORITY APPLN. INFO.: US 1998-139460 A 19980825
US 1998-211978 A 19981215
US 1999-336773 A 19990621
OTHER SOURCE(S): CASREACT 132:166391; MARPAT 132:166391
GI



I

AB Sterol and stanol esters I [R1 = alkyl fatty acid chain; R2 = alkyl steroidal side chain] were prepd. by direct **esterification** of stanols and sterols with **catalyst**, which can be acidic or basic, in the presence of a color deactivating agent. The method provides a synthetic route that is amenable to large scale prodn. of the esters in high yields and employs a food grade process free of org. solvents or mineral acids. Thus .beta.-sitostanol stearate was prepd. by NaHSO4 catalyzed **esterification** of .beta.-sitostanol and stearic acid.

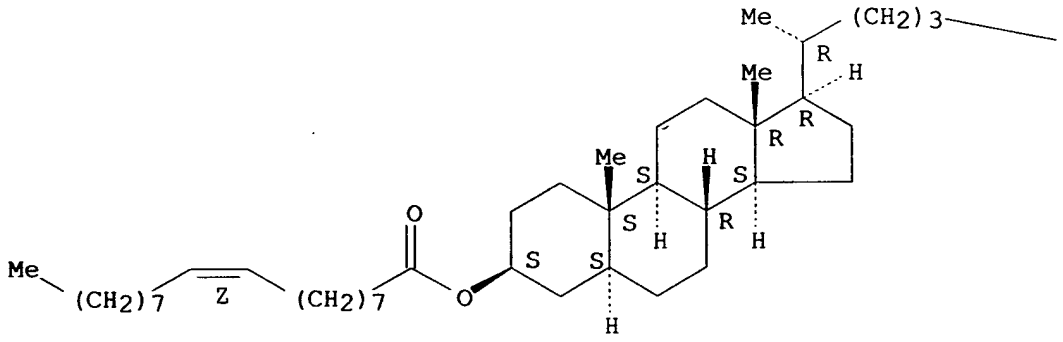
IT **2078-50-4P**, Cholestanol oleate **42493-62-9P**, .beta.-Sitostanol palmitate **108515-19-1P**, .beta.-Sitostanol oleate **108590-63-2P**, .beta.-Sitostanol stearate
RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)
(prepn. of sterol and stanol-esters)

RN 2078-50-4 CAPLUS

CN Cholestan-3-ol, (9Z)-9-octadecenoate, (3.beta.,5.alpha.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.

PAGE 1-A



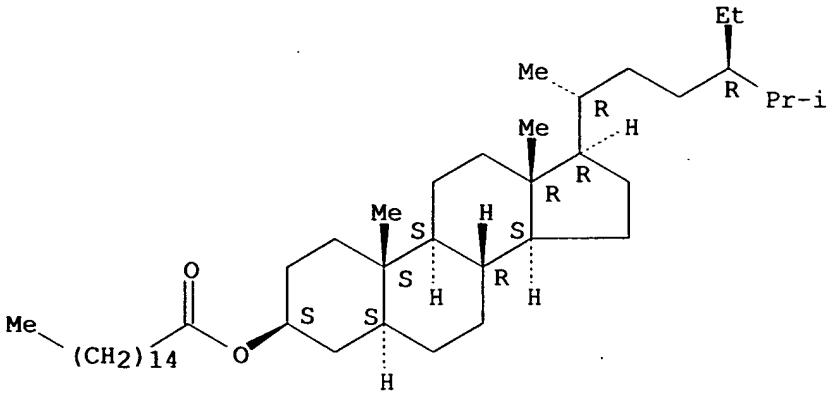
PAGE 1-B

—CHMe2

RN 42493-62-9 CAPLUS

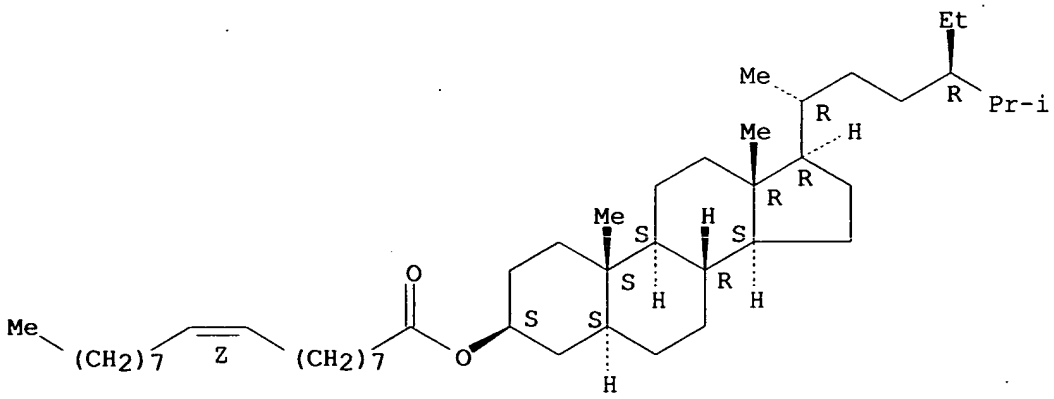
CN Stigmastan-3-ol, hexadecanoate, (3.beta.,5.alpha.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



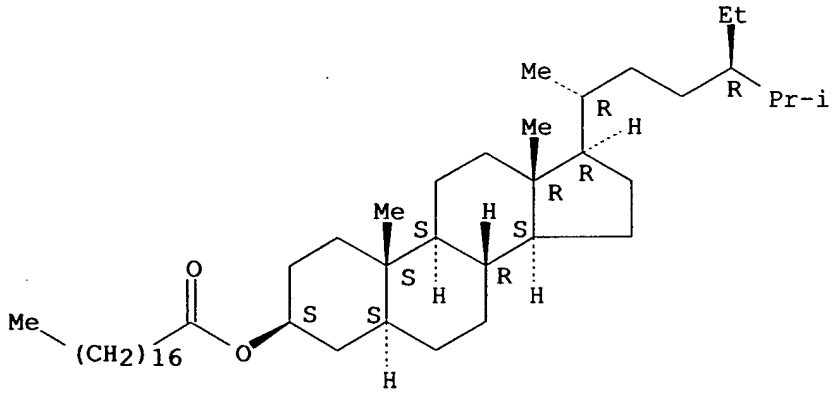
RN 108515-19-1 CAPLUS
CN Stigmastan-3-ol, (9Z)-9-octadecenoate (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



RN 108590-63-2 CAPLUS
CN Stigmastan-3-ol, octadecanoate, (3.beta.,5.alpha.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



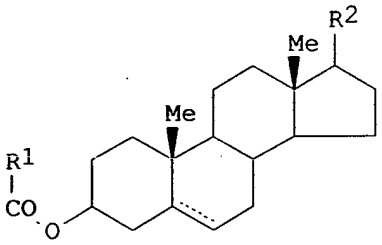
L11 ANSWER 8 OF 16 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2000:144572 CAPLUS

DOCUMENT NUMBER: 132:166390
TITLE: Preparation of sterol and stanol esters
INVENTOR(S): Higgins, John D.
PATENT ASSIGNEE(S): McNeil-PPC, Inc., USA
SOURCE: Eur. Pat. Appl., 10 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 5
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
EP 982315	A2	20000301	EP 1999-300486		19990122
EP 982315	A3	20010926			
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO					
US 5892068	A	19990406	US 1998-139460		19980825
US 6147236	A	20001114	US 1998-211978		19981215
PRIORITY APPLN. INFO.:			US 1998-139460	A	19980825
			US 1998-211978	A	19981215

OTHER SOURCE(S): CASREACT 132:166390; MARPAT 132:166390

GI



I

AB Sterol and stanol esters I [R1 = alkyl fatty acid chain; R2 = alkyl steroidal side chain] were prepd. by direct **esterification** of stanols and sterols with **catalyst**, which can be acidic or basic, in the presence of a color deactivating agent. The method provides a synthetic route that is amenable to large scale prodn. of the esters in high yields and employs a food grade process free of org. solvents or mineral acids. Thus .beta.-sitostanol stearate was prepd. by NaHSO4 catalyzed **esterification** of .beta.-sitostanol and stearic acid.

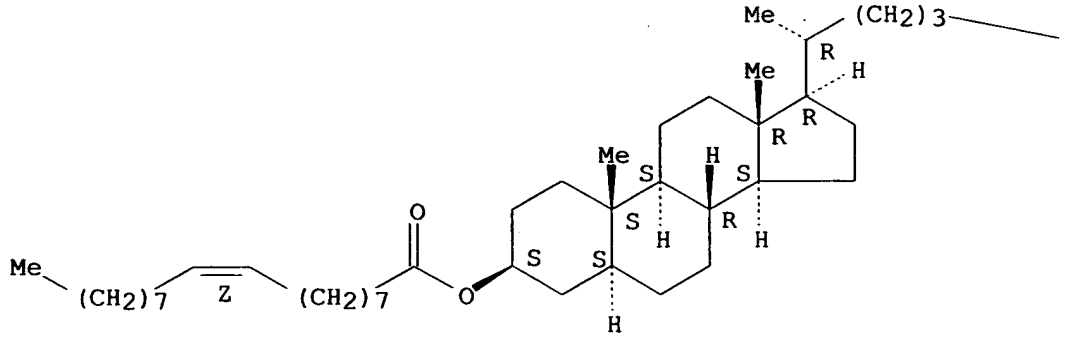
IT **2078-50-4P**, Cholestanol oleate **42493-62-9P**, .beta.-Sitostanol palmitate **108515-19-1P**, .beta.-Sitostanol oleate **108590-63-2P**, .beta.-Sitostanol stearate
RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)
(prepn. of sterol and stanol esters)

RN 2078-50-4 CAPLUS

CN Cholestan-3-ol, (9Z)-9-octadecenoate, (3.beta.,5.alpha.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.

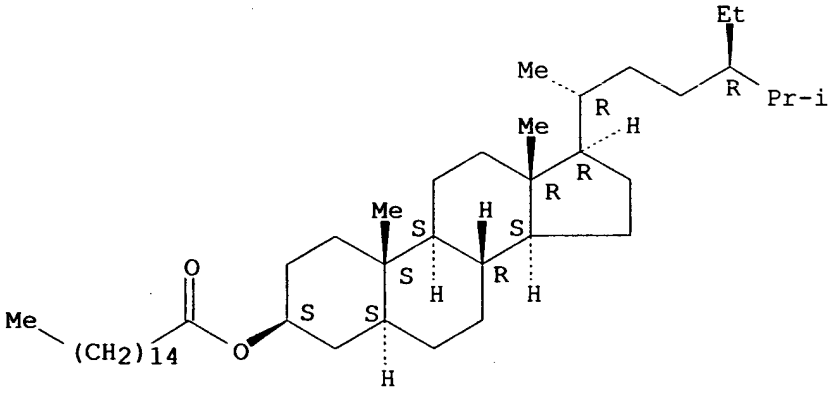
PAGE 1-A



PAGE 1-B

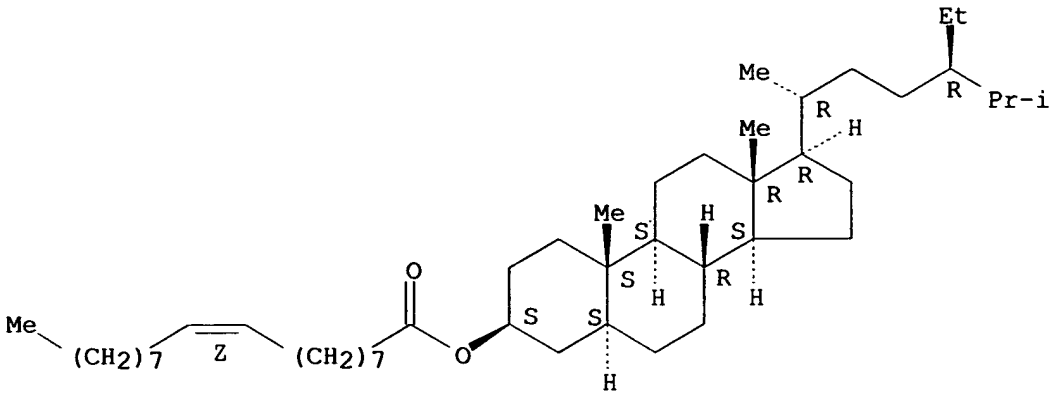
RN 42493-62-9 CAPLUS
CN Stigmastan-3-ol, hexadecanoate, (3.beta.,5.alpha.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



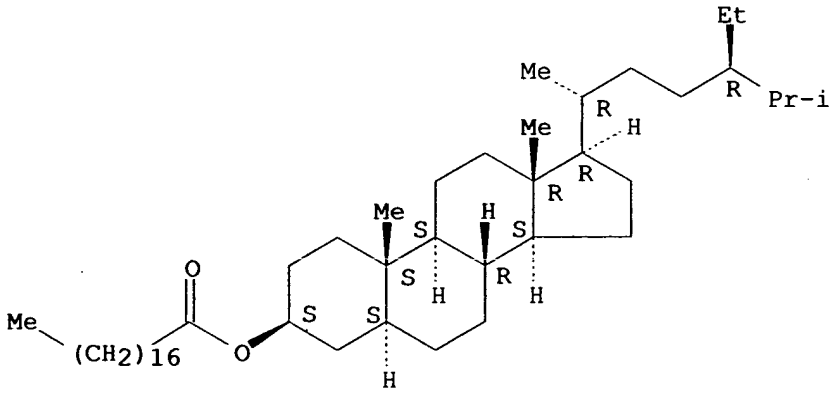
RN 108515-19-1 CAPLUS
CN Stigmastan-3-ol, (9Z)-9-octadecenoate (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



RN 108590-63-2 CAPLUS
CN Stigmastan-3-ol, octadecanoate, (3.beta.,5.alpha.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L11 ANSWER 9 OF 16 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1999:227957 CAPLUS
DOCUMENT NUMBER: 130:252534
TITLE: Preparation of sterol and stanol-esters
INVENTOR(S): Higgins, John D., III
PATENT ASSIGNEE(S): McNeil-PPC, Inc., USA
SOURCE: U.S., 4 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 5
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5892068	A	19990406	US 1998-139460	19980825
US 6147236	A	20001114	US 1998-211978	19981215
AU 9913166	A1	20000309	AU 1999-13166	19990119
AU 764572	B2	20030821		
ZA 9900368	A	20000719	ZA 1999-368	19990119
NZ 333817	A	20000929	NZ 1999-333817	19990119
CN 1245810	A	20000301	CN 1999-100882	19990120
EP 982315	A2	20000301	EP 1999-300486	19990122
EP 982315	A3	20010926		

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO					
RU 2220150	C2	20031227	RU 1999-101858		19990122
JP 2000072794	A2	20000307	JP 1999-20742		19990128
KR 2000016828	A	20000325	KR 1999-3727		19990204
US 6184397	B1	20010206	US 1999-336773		19990621
IN 186960	A	20011222	IN 1999-CA697		19990809
NZ 337240	A	20000228	NZ 1999-337240		19990813
AU 9944505	A1	20000309	AU 1999-44505		19990816
AU 767636	B2	20031120			
JP 2000072793	A2	20000307	JP 1999-235542		19990823
EP 982316	A2	20000301	EP 1999-306718		19990824
EP 982316	A3	20000705			
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO					
KR 2000017479	A	20000325	KR 1999-35134		19990824
MX 9907839	A	20000930	MX 1999-7839		19990824
ZA 9905418	A	20010220	ZA 1999-5418		19990824
RU 2230750	C2	20040620	RU 1999-118509		19990824
CN 1251837	A	20000503	CN 1999-121644		19990825
CN 1131871	B	20031224			
BR 9903832	A	20000919	BR 1999-3832		19990825
PRIORITY APPLN. INFO.:			US 1998-139460	A2	19980825
			US 1998-211978	A	19981215
			US 1999-336773	A	19990621

OTHER SOURCE(S): CASREACT 130:252534; MARPAT 130:252534

AB The present invention provides a method for the direct **esterification** of stanols and sterols with fatty acids to form stanol/sterol-esters. The method provides a synthetic route that is amenable to large scale prodn. of the esters in high yields. A preferred embodiment employs a food grade process free of org. solvents or mineral acids. Thus, .beta.-sitostanol was reacted with stearic acid using sodium bisulfate as the **catalyst** to give .beta.-sitostanol stearate.

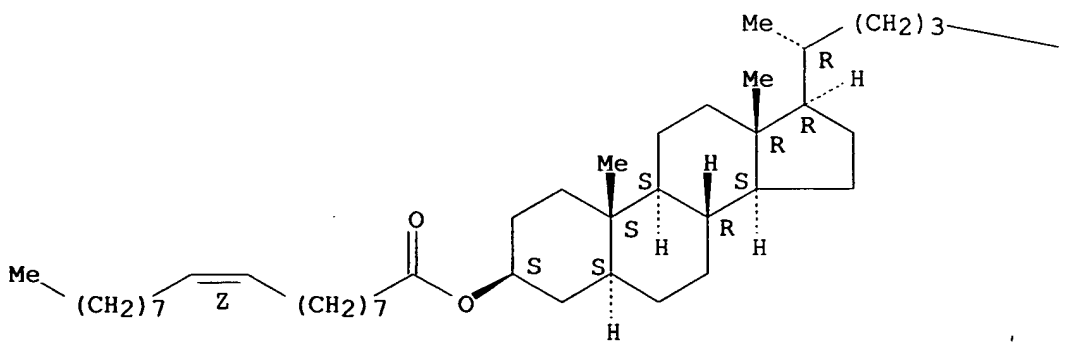
IT **2078-50-4P**, Cholestanol oleate **42493-62-9P**, .beta.-Sitostanol palmitate **108515-19-1P**, .beta.-Sitostanol oleate **108590-63-2P**, .beta.-Sitostanol stearate
RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)
(prepn. of sterol and stanol fatty acid esters)

RN 2078-50-4 CAPLUS

CN Cholestan-3-ol, (9Z)-9-octadecenoate, (3.beta.,5.alpha.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.

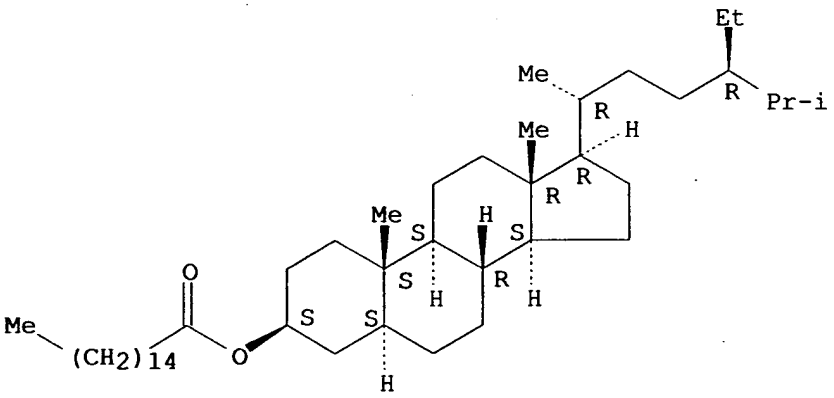
PAGE 1-A



—$CHMe_2$

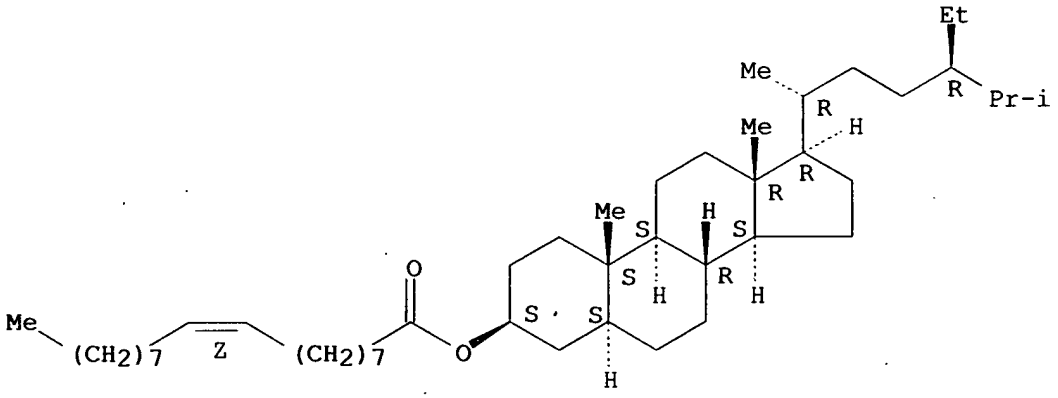
RN 42493-62-9 CAPLUS
CN Stigmastan-3-ol, hexadecanoate, (3.beta.,5.alpha.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



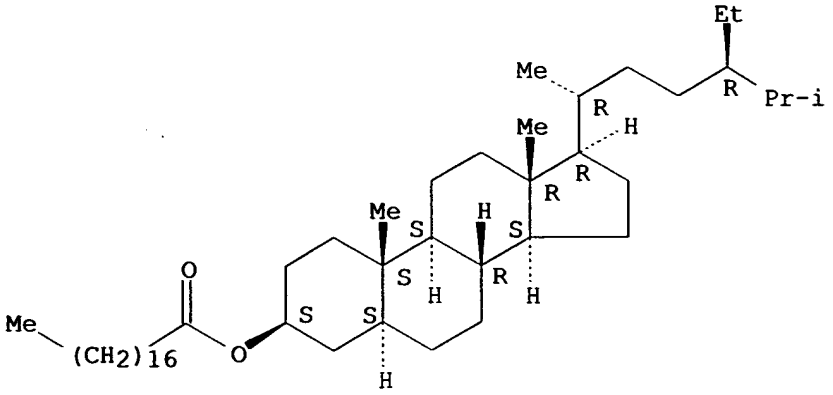
RN 108515-19-1 CAPLUS
CN Stigmastan-3-ol, (9Z)-9-octadecenoate (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



RN 108590-63-2 CAPLUS
CN Stigmastan-3-ol, octadecanoate, (3.beta.,5.alpha.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 10 OF 16 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1995:974016 CAPLUS
DOCUMENT NUMBER: 124:144931
TITLE: Preparation of carboxylic acid esters
INVENTOR(S): Mukoyama, Mitsuaki; Shiina, Isamu; Myoshi, Satoshi; Myashita, Mitsutomo
PATENT ASSIGNEE(S): Kyorin Seiyaku Kk, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 07247241	A2	19950926	JP 1994-39668	19940310
JP 3279801	B2	20020430		
PRIORITY APPLN. INFO.:			JP 1994-39668	19940310

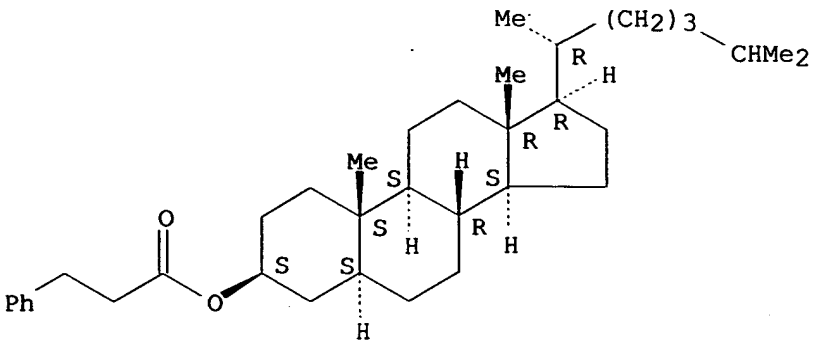
OTHER SOURCE(S): CASREACT 124:144931; MARPAT 124:144931

AB R1CO2R2 [R1-2 = (un)substituted alkyl, (un)substituted aryl] are prepd. by treating R1CO2H with R2OH in the presence of (R3CO)2O [I; R3 = (un)substituted aryl], R4nSiX4-n (R4 = lower alkyl; X halo; n = 1-3), and cationic catalysts. A suspension of AgClO4, TiCl4, and Me3SiCl in CH2Cl2 was mixed with a soln. of 3-phenylpropionic acid and I (R3 = 4-CF3C6H4) in CH2Cl2, then treated with a soln. of 1-methyl-3-phenylpropanol in CH2Cl2 at room temp. for 3 h to give 99% 1-methyl-3-phenylpropyl 3-phenylpropionate.

IT **14914-98-8P**
RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)
(prepn. of carboxylic acid esters from carboxylic acids and alcs. using cationic catalysts and fluorobenzoic anhydrides and haloalkylsilane)

RN 14914-98-8 CAPLUS
CN Cholestan-3-ol, benzenepropanoate, (3.beta.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).

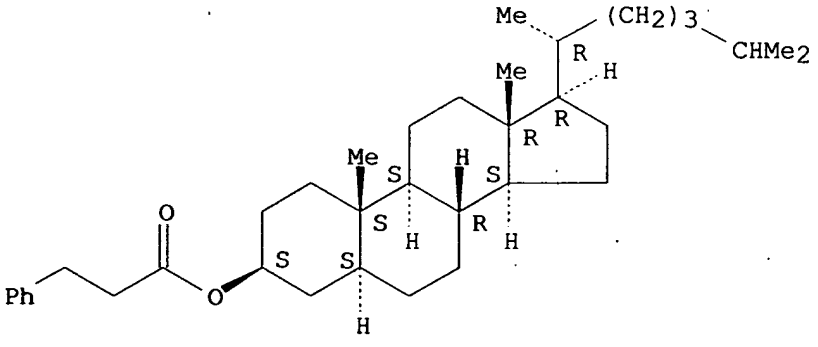


L11 ANSWER 11 OF 16 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1994:434946 CAPLUS
DOCUMENT NUMBER: 121:34946
TITLE: A useful method for the preparation of carboxylic esters from free carboxylic acids and alcohols
AUTHOR(S): Shiina, Isamu; Miyoshi, So; Miyashita, Mitsutomo; Mukaiyama, Teruaki
CORPORATE SOURCE: Fac. Sci., Sci. Univ. Tokyo, Tokyo, 162, Japan
SOURCE: Chemistry Letters (1994), (3), 515-18
CODEN: CMLTAG; ISSN: 0366-7022
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 121:34946

AB Various carboxylic esters, e.g., PhCH2CH2CO2CH2Ph, are prepd. in excellent yields from nearly equimolar amts. of free carboxylic acids and alcs. at room temp. by combined use of 4-(trifluoromethyl)benzoic anhydride and a catalytic amt. of active Ti(IV) salt together with chlorotrimethylsilane.

IT **14914-98-8P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)
RN 14914-98-8 CAPLUS
CN Cholestan-3-ol, benzenepropanoate, (3.beta.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



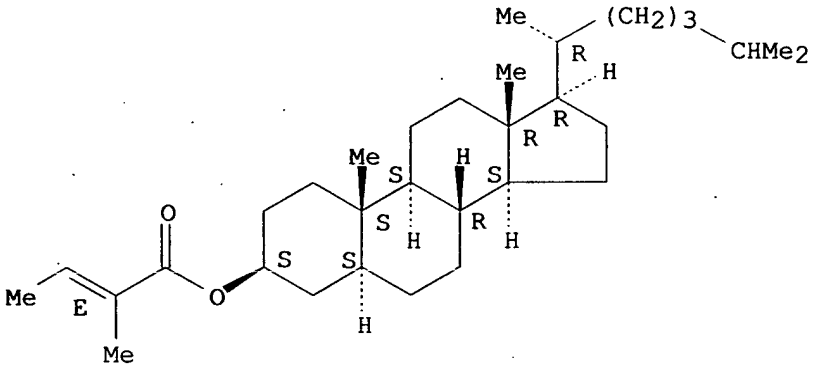
L11 ANSWER 12 OF 16 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1994:7863 CAPLUS
DOCUMENT NUMBER: 120:7863
TITLE: A new and efficient **esterification** reaction via mixed anhydrides by the promotion of a catalytic amount of Lewis acid
AUTHOR(S): Miyashita, Mitsutomo; Shiina, Isamu; Miyoshi, So;

Mukaiyama, Teruaki
CORPORATE SOURCE: Fac. Sci., Sci. Univ. Tokyo, Tokyo, 162, Japan
SOURCE: Bulletin of the Chemical Society of Japan (1993), 66(5), 1516-27
CODEN: BCSJA8; ISSN: 0009-2673
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 120:7863
AB In the presence of a catalytic amt. of Lewis acid, various carboxylic esters or S-Ph carbothioates are prepd. in excellent yields by the resp. reactions of equimolar amts. of silyl carboxylates and alkyl silyl ethers or Ph silyl sulfides with 4-trifluoromethylbenzoic anhydride.

IT **105185-25-9P 150272-57-4P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

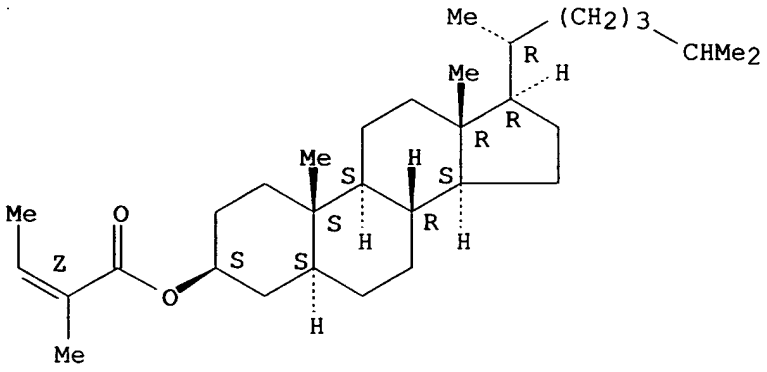
RN 105185-25-9 CAPLUS
CN Cholestan-3-ol, 2-methyl-2-butenoate, [3.beta.(E),5.alpha.]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



RN 150272-57-4 CAPLUS
CN Cholestan-3-ol, 2-methyl-2-butenoate, [3.beta.(Z),5.alpha.]- (9CI) (CA INDEX NAME)

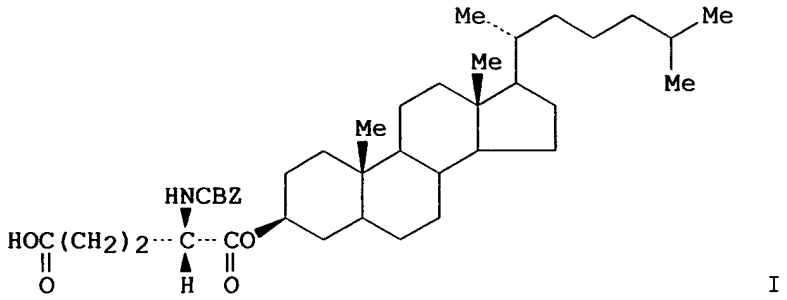
Absolute stereochemistry.
Double bond geometry as shown.



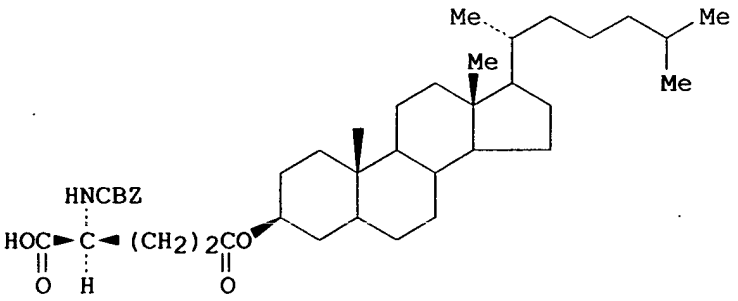
L11 ANSWER 13 OF 16 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1992:214772 CAPLUS
DOCUMENT NUMBER: 116:214772

10/678,135

TITLE: Synthesis of D-glucopyranosyl cholestan-3.beta.-yl glutamate derivatives
AUTHOR(S): Takano, Etsu
CORPORATE SOURCE: Fac. Hyg., Kitasato Univ., Sagamihara, 228, Japan
SOURCE: Chemical & Pharmaceutical Bulletin (1992), 40(2), 509-12
CODEN: CPBTAL; ISSN: 0009-2363
DOCUMENT TYPE: Journal
LANGUAGE: English
GI



I



II

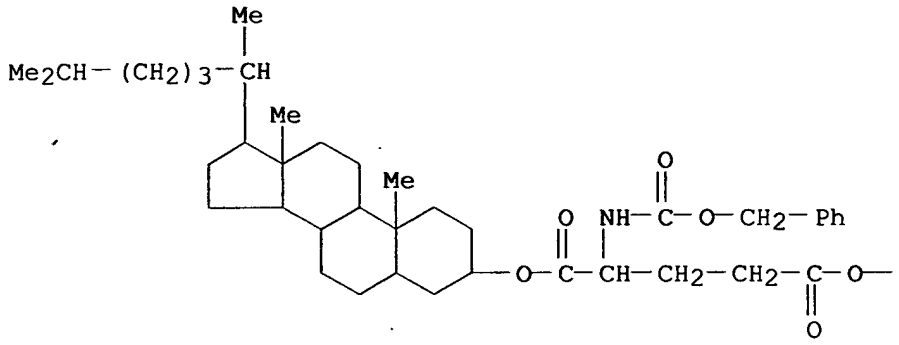
AB Preferential formation of 1-(cholestan-3.beta.-yl)-N-CBZ-L-glutamate I (CBZ = benzyloxycarbonyl) or 5-(cholestan-3.beta.-yl)-N-CBZ-L-glutamate II were obtained when dicyclohexylamine or 4-(dimethylamino)pyridine was used as a basic **catalyst** for ester formation. Each glutamate was converted to an anomeric mixt. of glucose derivs. using 2,3,4,6-tetra-O-benzyl-.alpha.-D-glucopyranose. After chromatog. sepn. of these isomers, their structures were detd. by field desorption mass and NMR spectrometries.

IT **141103-74-4P 141103-75-5P 141103-76-6P 141196-31-8P 141196-32-9P**
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and NMR of)

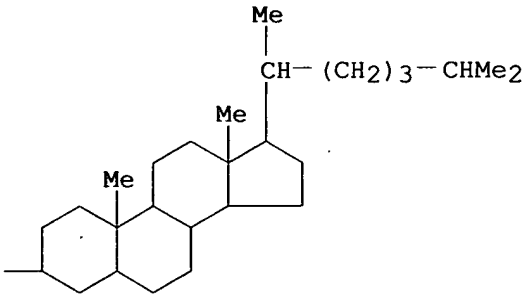
RN 141103-74-4 CAPLUS

CN L-Glutamic acid, N-[(phenylmethoxy)carbonyl]-, bis[(3.beta.,5.alpha.)-cholestan-3-yl] ester (9CI) (CA INDEX NAME)

PAGE 1-A

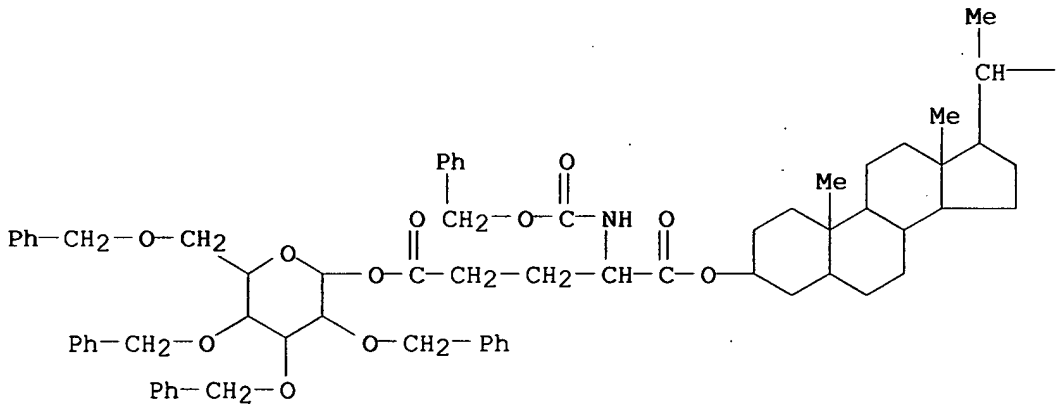


PAGE 1-B



RN 141103-75-5 CAPLUS
CN L-Glutamic acid, N-[(phenylmethoxy)carbonyl]-, 1-[(3.beta.,5.alpha.)-cholestan-3-yl] 5-[2,3,4,6-tetrakis-O-(phenylmethyl)-.alpha.-L-glucopyranosyl] ester (9CI) (CA INDEX NAME)

PAGE 1-A

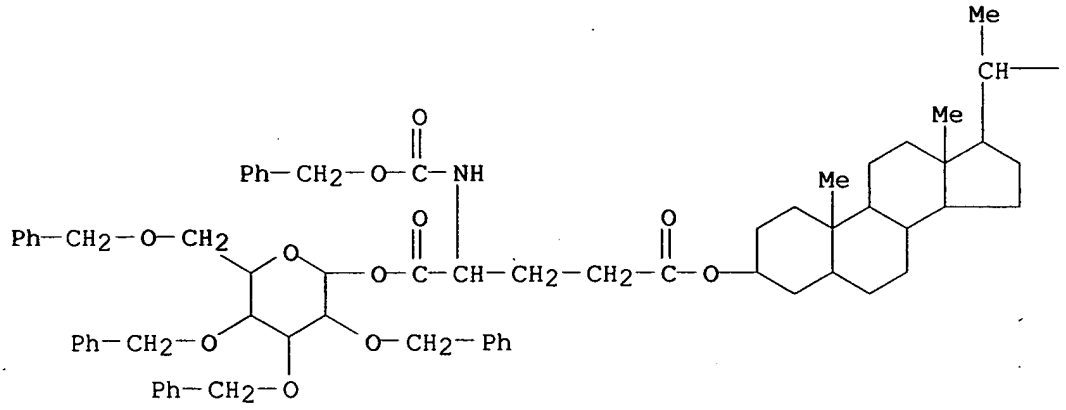


PAGE 1-B

— $(CH_2)_3-CHMe_2$

RN 141103-76-6 CAPLUS
CN L-Glutamic acid, N-[(phenylmethoxy)carbonyl]-, 5-[(3.beta.,5.alpha.)-cholestan-3-yl] 1-[2,3,4,6-tetrakis-O-(phenylmethyl)-.alpha.-L-glucopyranosyl] ester (9CI) (CA INDEX NAME)

PAGE 1-A

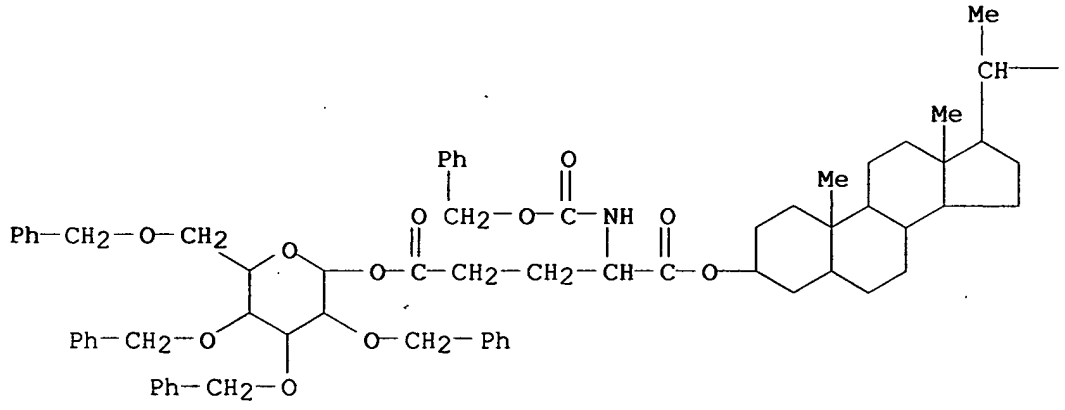


PAGE 1-B

— $(CH_2)_3$—$CHMe_2$

RN 141196-31-8 CAPLUS
CN L-Glutamic acid, N-[(phenylmethoxy)carbonyl]-, 1-[(3.beta.,5.alpha.)-cholestan-3-yl] 5-[2,3,4,6-tetrakis-O-(phenylmethyl)-.beta.-D-glucopyranosyl] ester (9CI) (CA INDEX NAME)

PAGE 1-A

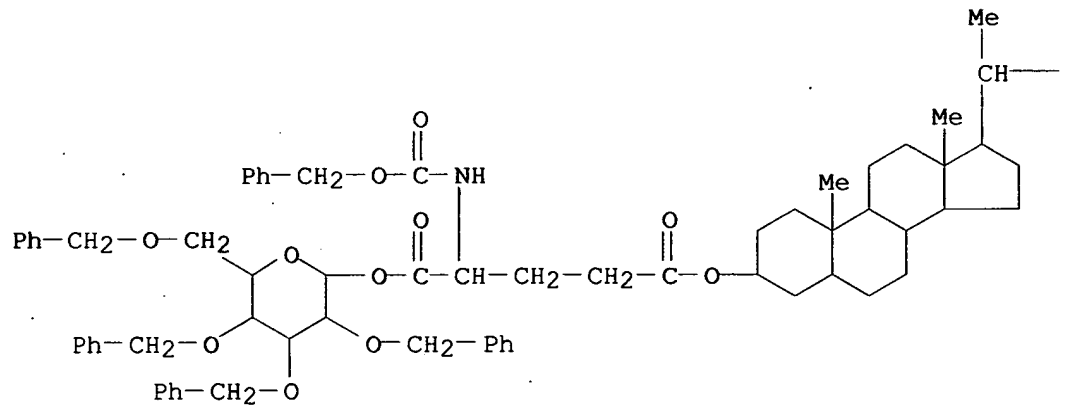


PAGE 1-B

— $(CH_2)_3$— $CHMe_2$

RN 141196-32-9 CAPLUS
CN L-Glutamic acid, N-[(phenylmethoxy)carbonyl]-, 5-[(3.beta.,5.alpha.)-cholestan-3-yl] 1-[2,3,4,6-tetrakis-O-(phenylmethyl)-.beta.-D-glucopyranosyl] ester (9CI) (CA INDEX NAME)

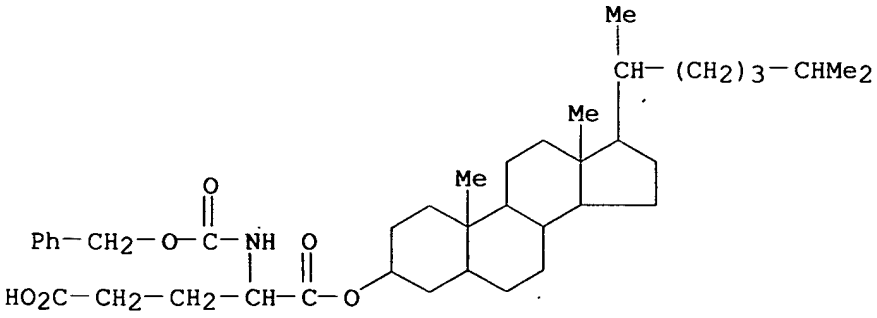
PAGE 1-A



PAGE 1-B

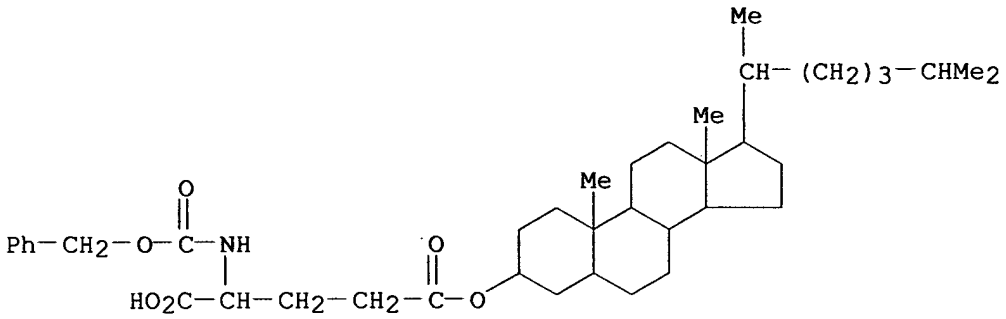
— $(CH_2)_3$— $CHMe_2$

IT **141103-72-2P 141103-73-3P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and sequential conversion to acid chloride and coupling reaction of, with tetrabenzylglucopyranose)
RN 141103-72-2 CAPLUS
CN L-Glutamic acid, N-[(phenylmethoxy)carbonyl]-, 1-[(3.beta.,5.alpha.)-cholestan-3-yl] ester (9CI) (CA INDEX NAME)



RN 141103-73-3 CAPLUS

CN L-Glutamic acid, N-[(phenylmethoxy)carbonyl]-, 5-[(3.beta.,5.alpha.)-cholestan-3-yl] ester (9CI) (CA INDEX NAME)



L11 ANSWER 14 OF 16 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1988:204886 CAPLUS
DOCUMENT NUMBER: 108:204886
TITLE: An enzymatic process for preparing fatty acid esters of sterols and branched aliphatic alcohols
INVENTOR(S): Myojo, Katsunori; Matsufune, Youichi; Yoshikawa, Shiro
PATENT ASSIGNEE(S): Yoshikawa Oil and Fat Co., Ltd., Japan
SOURCE: Eur. Pat. Appl., 146 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 195311	A2	19860924	EP 1986-102861	19860305
EP 195311	A3	19871028		
EP 195311	B1	19900627		
EP 195311	B2	19960117		
R: DE, FR, GB, IT, NL				
JP 61204197	A2	19860910	JP 1985-45128	19850306
JP 05033712	B4	19930520		
JP 62048391	A2	19870303	JP 1985-190543	19850829
JP 06095950	B4	19941130		
JP 62166895	A2	19870723	JP 1986-7732	19860116
JP 2554469	B2	19961113		
ES 555633	A1	19870701	ES 1986-555633	19860520
CH 667284	A	19880930	CH 1986-2181	19860529
US 5219733	A	19930615	US 1990-563895	19900807
PRIORITY APPLN. INFO.:			JP 1985-45128 A	19850306
			JP 1985-190543 A	19850829
			JP 1986-7732 A	19860116
			US 1986-836362 B1	19860305

AB The title esters are prepd. by enzymic **esterification** of sterols or C14-32 branched aliph. primary or secondary alcs. with fatty acids or esters. The enzyme (lipase or cholesterol esterase) may be immobilized, and the solvent may be aq. or aq. org. A mixt. of 100 mg cholesterol, 220 mg oleic acid, 2.0 mL H2O, and 0.5 mL aq. lipase (500 IU) was stirred for 18 h to give cholesteryl oleate with a synthesis ratio of 98.2%. Numerous variations of reactants, catalysts, solvents, etc., were explored.

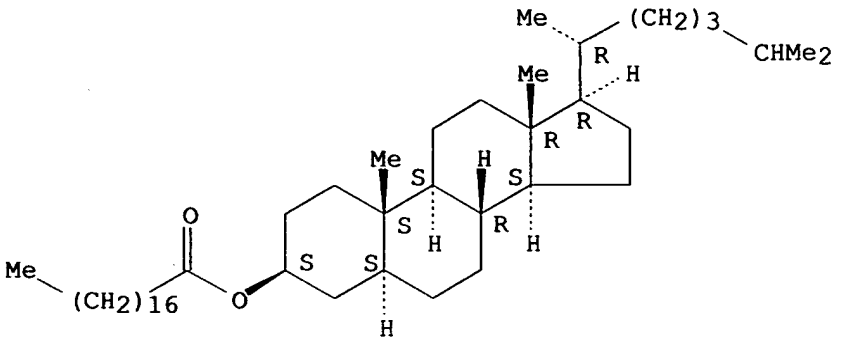
IT **59000-66-7P**, .beta.-Cholestanyl stearate
RL: PREP (Preparation)
(prepn. of, by enzymic **esterification**)

RN 59000-66-7 CAPLUS

10/678,135

CN Cholestan-3-ol, octadecanoate, (3.beta.,5.alpha.)- (9CI) (CA INDEX NAME)

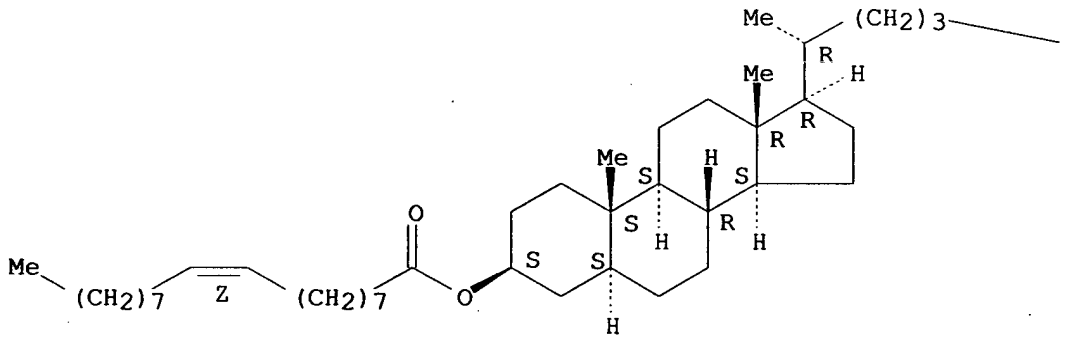
Absolute stereochemistry.



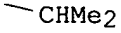
IT **2078-50-4P**, .beta.-Cholestanyl oleate
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, by enzymic **esterification**)
RN 2078-50-4 CAPLUS
CN Cholestan-3-ol, (9Z)-9-octadecenoate, (3.beta.,5.alpha.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.

PAGE 1-A



PAGE 1-B



L11 ANSWER 15 OF 16 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1987:459322 CAPLUS
DOCUMENT NUMBER: 107:59322
TITLE: Perfluoroalkyl esters of sterols and bile acids
AUTHOR(S): Malik, A. A.; Sharts, C. M.
CORPORATE SOURCE: Chem. Dep., San Diego State Univ., San Diego, CA, 92182, USA
SOURCE: Journal of Fluorine Chemistry (1987), 34(3-4), 395-408
CODEN: JFLCAR; ISSN: 0022-1139
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 107:59322

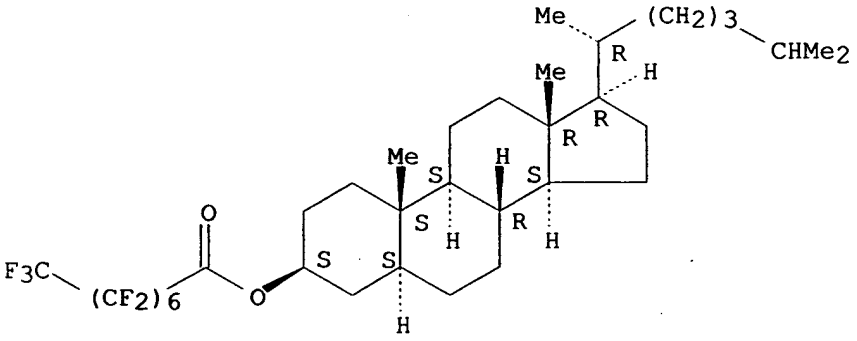
AB Mono-, bis-, and tris(perfluorooctanoyl)oxy derivs. of sterols and bile acids were prepd. In the prepn. of tris(perfluorooctanoyloxy) steroids, 4-(dimethylamino)pyridine (DMAP) was the **catalyst**. Without DMAP the HO at C-12 did not react. The products are intended for testing as coemulsifying agents for synthetic blood formulations.

IT **109481-61-0P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

RN 109481-61-0 CAPLUS

CN Cholestan-3-ol, pentadecafluorooctanoate, (3.beta.,5.alpha.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L11 ANSWER 16 OF 16 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1980:639294 CAPLUS

DOCUMENT NUMBER: 93:239294

TITLE: Utilization of derivatives of thiazolidine-2-thione: **esterification**

AUTHOR(S): Nagao, Yoshimitsu; Hayashi, Michiko; Fujita, Eiichi

CORPORATE SOURCE: Inst. Chem. Res., Kyoto Univ., Uji, 611, Japan

SOURCE: Chemical & Pharmaceutical Bulletin (1980), 28(4), 1245-50
CODEN: CPBTAL; ISSN: 0009-2363

DOCUMENT TYPE: Journal

LANGUAGE: English

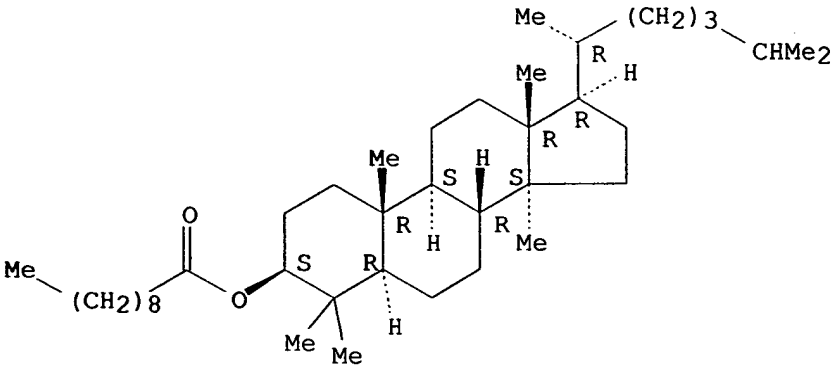
AB **Esterification** of acid chlorides by alcs. in the presence of the thallium (I) salt of thiazolidine-2-thione showed that the salt is probably both a hydrogen and chloride acceptor for reactive alcs., whereas the thiazolidinethione likely acts as an HCl acceptor for less reactive alcs. Use of the thallium salt and excess acid chloride in hot benzene gave good yields rapidly.

IT **75594-78-4P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, in presence of thiazolidinethione thallium salt)

RN 75594-78-4 CAPLUS

CN Lanostan-3-ol, decanoate, (3.beta.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



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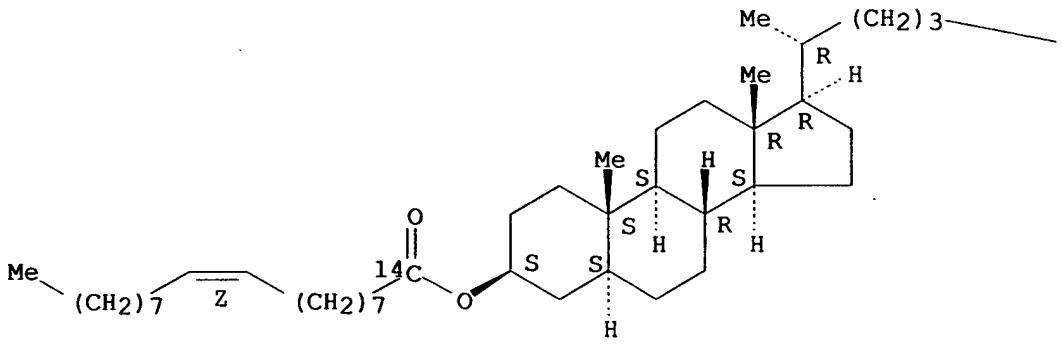
L20 ANSWER 1 OF 4 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1989:110646 CAPLUS
DOCUMENT NUMBER: 110:110646
TITLE: Inhibitors of sterol synthesis. Oleate ester of 5.alpha.-cholest-8(14)-en-3.beta.-ol-15-one as a substrate for pancreatic cholesterol esterase
AUTHOR(S): Stephens, Thomas W.; Schroepfer, George J., Jr.
CORPORATE SOURCE: Dep. Biochem., Rice Univ., Houston, TX, USA
SOURCE: Biochimica et Biophysica Acta (1988), 963(3), 395-400
CODEN: BBACAQ; ISSN: 0006-3002
DOCUMENT TYPE: Journal
LANGUAGE: English

AB 5.alpha.-Cholest-8(14)-en-3.beta.-ol-15-one oleate (15-ketosteryl oleate), the oleate ester of a compd. with the capacity to lower **serum cholesterol**, was effectively hydrolyzed by partially purified porcine pancreatic cholesterol esterase with an apparent Km of 0.28 mM and a Vmax of 0.62 .mu.mol/min/mg protein compared to an apparent Km of 0.19 mM and a Vmax of 0.37 .mu.mol/min/mg protein for cholesteryl oleate. The 15-ketosteryl oleate was also hydrolyzed by highly purified rat pancreatic cholesterol esterase with an apparent Km of 0.20 mM and a Vmax of 86.7 .mu.mol/min/mg protein compared to an apparent Km of 0.43 mM and a Vmax of 119.8 .mu.mol/min/mg protein for cholesteryl oleate. 15-Ketosteryl oleate is, therefore, a good substrate for pancreatic cholesterol esterase from either source. The 15-ketosterol is a weak competitive inhibitor of partially purified porcine pancreatic cholesterol esterase when cholesteryl oleate is the substrate.

IT **119259-98-2P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)
RN 119259-98-2 CAPLUS
CN Cholestan-3-ol, 9-octadecenoate-1-14C, [3.beta.(Z)]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.

PAGE 1-A



PAGE 1-B

CHMe2

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(FILE 'HOME' ENTERED AT 11:11:10 ON 18 MAR 2005)

FILE 'REGISTRY' ENTERED AT 11:13:56 ON 18 MAR 2005
L1 STRUCTURE UPLOADED
L2 QUE L1
L3 10904 S L2 FUL
L4 STRUCTURE UPLOADED
L5 QUE L4
L6 3629 S L5 FUL

FILE 'CAPLUS' ENTERED AT 11:16:19 ON 18 MAR 2005
L7 1393 S L6/P
L8 44 S L6/THU
L9 124038 S ESTERIF?/IA
L10 683181 S CATALYST/IA
L11 16 S L7 AND L9 AND L10
L12 1943 S (FOOD(2W)GRADE?)/IA
L13 4 S L7 AND L9 AND L10 AND L12
L14 12 S L11 NOT L13

FILE 'REGISTRY' ENTERED AT 11:24:54 ON 18 MAR 2005
L15 1 S SODIUM ETHYLATE/CN

FILE 'CAPLUS' ENTERED AT 11:25:43 ON 18 MAR 2005
L16 2492 S (SODIUM ETHYLATE)/IA OR L15
L17 2 S L7 AND L16
L18 0 S L16 AND L11
L19 19504 S (SERUM(3W)CHOLESTEROL#)/IA
L20 4 S L6 AND L19
L21 312906 S FOOD/IA
L22 2524 S L6
L23 11 S L22 AND L21 AND ?CHOLESTEROL/IA
L24 0 S PY.1991